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THE EFFECT OF NONRESPONSE

*on representativeness
of Wilderness-Trail Register Information*

BY WILEY D. WENGER, JR., AND H. M. GREGERSEN

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CONTENTS

	Page
INTRODUCTION	1
RESEARCH METHODS	3
FINDINGS	5
DISCUSSION OF ANALYSES	7
Trails and Blocks	7
Days of Week	7
Classes and Mode of Travel	7
Size of Party	8
Purpose of Trip	8
Frequency of Use	9
Residence Community	10
Reason for Choosing Area	10
Distance Traveled into the Area, Length of Stay	10
Membership in Outdoor Clubs	10
Occupation	10
CONCLUSIONS	11
APPENDIX—REGISTRATION FORMS AND INTERVIEW SCHEDULES ...	13

INTRODUCTION

Reliable information about wilderness recreation use is essential to sound wilderness allocation and management. Such information may be obtained from a system of unmanned registration stations properly employed on wilderness trails.¹

The specific objective for employing any particular system of stations might be one or both of the following: (1) to obtain a detailed estimate of amount and patterns of recreation use; (2) to obtain a description of the sociophysical characteristics of user types and the names and addresses of wilderness recreationists from which samples could be drawn for additional research.

Each of these objectives could be most easily met if all trail users registered and did so accurately. But, expectedly, some trail users do not register at all, and some register inaccurately. As a consequence, quantitative adjustments in "raw" registration data are necessary to obtain sound estimates and descriptions of actual recreation use and users. Also, an evaluation of bias, or distortion, inherent in the "raw" registration data is essential to deciding when and

how that data can be used without adjustment to describe features of the entire population, such as length of stay or origin of visitors. It is also essential for sound extension of all research findings based on samples of names selected from registrations.

Quantitative estimation of actual use from registration data will be discussed in a subsequent report. This report evaluates the qualitative bias, or effect of nonresponse on the representativeness, of registration data obtained on two areas in Oregon. It examines the questions: How accurate a description of all recreationists is contained in the registrations of self-selected registrants? What social factors are associated with variation in response to registration stations?

Because the findings reported here are based on only two areas, they are not directly applicable to other areas. However, they do direct attention to some dimensions of wilderness-trail registration information likely to be biased on other areas. The report also suggests some other issues needing more attention by students of outdoor recreation, e.g., the adequacy of the "purpose of visit" concept.

The research methods are described first and are followed by the findings. A discussion of the findings and conclusions are then presented.

¹ Wenger, Wiley D., Jr. A test of unmanned registration stations on wilderness trails: factors influencing effectiveness. U. S. Forest Serv. Res. Paper PNW-16, 48 pp., illus. 1964.



Research Methods

This evaluation of bias in raw registration data was part of a 2-year study testing the effectiveness of unmanned registration stations for obtaining wilderness-use information. The study was conducted during June to October of 1961 and July to September of 1962. The two study areas were the Three Sisters Wilderness and Mountain Lakes Wild Areas, located in the central and southern Oregon Cascades, respectively.

Registration stations each included (1) a sign to attract the trail user's attention and to elicit an appropriate registration response, (2) a box designed for storage and protection of forms and for use as a writing desk, and (3) accessory equipment, such as writing tools and a calendar. The 1962 stations had, in addition, a plastic-laminated map of local trails mounted above the registration box.

Stations were placed on all known access trails into each area (a total of 59 in 1962) at or near the point where the trails joined access roads (fig. 1). One person from each party was requested to register when both entering and leaving the area in 1961 but, in 1962, only when entering.

Data used to evaluate bias in registration data resulting from nonresponse or inaccurate response of user groups were obtained from interviews. According to a preplanned sampling plan, interviewers waited up survey trails beyond registration stations to interview parties after they had an opportunity to respond to a station. Interview periods on each survey trail were from 8 a.m. to 4 p.m. in 1961 and from 8 a.m. to 3 p.m. in 1962.

Data on each interviewed group were compared with registration data to determine if the group had registered. A total of 94 inter-

views with recreationists was obtained in 1961 and 146 in 1962.

Analyses for bias were based on groups and, more specifically, on the interviewee for each group. The interviewee was either a normal authority figure, e.g., father of a family group, or the informal leader of a more loosely organized group. Registered groups were compared with nonregistered groups on several variables for which adequate data were available. Chi-square analyses were made of the data, assuming groups to be independent. If sample differences on a variable could have occurred 5 or fewer times in 100 samples (0.05 significance level), the differences were considered significant in the population from which the sample was drawn.

Figure 1.—Unmanned registration stations were placed on all wilderness-access trails where they connected with access roads.



Samples of the registration forms and interview schedules used are shown in the appendix.

Additional details of research methodology are presented in a preceding report.²

Special terms used in this report are summarized below:

Area—one of the two study areas.

Block—a geographic subunit:

Block I—west side, Three Sisters Wilderness Area.

Block II—east side, Three Sisters Wilderness Area.

Block III—Mountain Lakes Wild Area.

Survey trail—one of the trails on which recreationists were interviewed: 18 in 1961, 10 in 1962.

² See footnote 1.

Population—all recreation groups using the study areas in a specific year.

Sampling unit—one group of trail users.

Group; party—one or more persons traveling together and/or camping as a unit.

Group leader—a person who takes the initiative in registration or as interviewee, or both.

Class—category of user groups based on sociophysical characteristics of the groups:

Class	Mode of travel	Time in area	Origin of registrant
1	Hiking	Day or less	60 miles or more from area
2	"	" " "	Less than 60 miles
3	"	Overnight or more	60 miles or more from area
4	"	" "	Less than 60 miles
5-8	Riding	--	--

Findings

Analyses were made for the following variables: (1) trails, (2) blocks, (3) days of week, (4) classes, (5) mode of travel, (6) size of party, (7) purpose of trip, (8) number of years' previous use, (9) number of times' previous use, (10) previous travel "this" year, (11) distance of residence community, (12) size of residence community, (13) reason for choosing areas to visit, (14) distance traveled in area, (15) length of stay, (16) membership of leader in an outdoor club, and (17) occupation of leader.

The responses to registration stations by groups are shown in table 1. A summary of the analyses is presented in table 2.

Table 1.—Responses of interviewed groups to registration stations, by several use variables

Year of data and variable	Registered groups	Non-registered groups	Total all groups	Percent registered
1962 Trail No.:				
34	18	2	20	90.0
36	14	6	20	70.0
38	19	7	26	73.1
63	24	9	33	72.7
74	17	2	19	89.5
Total	92	26	118	78.0
1961 Block:				
I	36	9	45	80.0
II	27	16	43	62.8
Total	63	25	88	71.6
1962 Block:				
I	53	16	69	76.8
II	57	20	77	74.0
Total	110	36	146	75.3
1962 Days of week:				
Weekends and holidays	87	27	114	76.3
Weekdays	23	9	32	71.9
Total	110	36	146	75.3
1962 Class:				
1	36	8	44	81.8
2	45	15	60	75.0
3	10	3	13	76.9
4	15	3	18	83.3
5-8	4	7	11	36.4
Total	110	36	146	75.3

Year of data and variable	Registered groups	Non-registered groups	Total all groups	Percent registered
1961 Mode of travel:				
Hiking	60	15	75	80.0
Riding	8	11	19	42.1
Total	68	26	94	72.3
1962 Mode of travel:				
Hiking	106	29	135	78.5
Riding	4	7	11	36.4
Total	110	36	146	75.3
1961 Size of party:				
1 person	4	5	9	44.4
2 persons	22	7	29	75.9
3 "	12	8	20	60.0
4-5 "	18	5	23	78.3
6+ "	12	1	13	92.3
Total	68	26	94	72.3
1962 Size of party:				
1 person	3	7	10	30.0
2 persons	33	13	46	71.7
3 "	18	4	22	81.8
4-5 "	36	7	43	83.7
6+ "	20	5	25	80.0
Total	110	36	146	75.3
1962 Purpose of trip:				
General recreation	93	21	114	81.6
Fishing	8	15	23	34.8
Other specific	9	0	9	100.0
Total	110	36	146	75.3
1962 Number years' prior use:				
1-2	25	1	26	96.2
3-5	21	9	30	70.0
6-10	8	5	13	61.5
10+	15	7	22	68.2
Total	69	22	91	75.8
1962 Number times' prior use:				
1-2	20	4	24	83.3
3-10	23	3	26	88.5
10+	26	15	41	63.4
Total	69	22	91	75.8
1961 Prior travel "this" year:				
Yes	18	14	32	56.2
No	47	12	59	79.7
Total	65	26	91	71.4
1962 Prior travel "this" year:				
Yes	33	16	49	67.3
No	77	20	97	79.4
Total	110	36	146	75.3

Table 1.—Responses of interviewed groups to registration stations, by several use variables—Continued

Year of data and variable	Registered groups	Non-registered groups	Total all groups	Percent registered
1961 Distance of residence: + 60 miles	27	6	33	81.8
- 60 miles	41	20	61	67.2
Total	68	26	94	72.3
1962 Distance of residence: + 60 miles	46	12	58	79.3
- 60 miles	64	24	88	72.7
Total	110	36	146	75.3
1961 Size of residence community: 0-2,000	15	7	22	68.2
2,000-10,000	7	3	10	70.0
10,000-25,000	15	9	24	62.5
25,000+	31	7	38	81.6
Total	68	26	94	72.3
1962 Reason for choice of area: Friends	42	17	59	71.2
Class	12	5	17	70.6
Chance	21	1	22	95.4
Here before	31	11	42	73.8
Other	4	2	6	66.7
Total	110	36	146	75.3

Year of data and variable	Registered groups	Non-registered groups	Total all groups	Percent registered
1962 Distance went into area: - 1 mile	24	4	28	85.7
1-3 miles	37	14	51	72.5
4-10 "	43	16	59	72.9
10+ "	6	2	8	75.0
Total	110	36	146	75.3
1961 Length of stay: -1 day	50	17	67	74.6
1-3 days	14	6	20	70.0
4+ "	4	3	7	57.1
Total	68	26	94	72.3
1962 Length of stay: -1 day	84	29	113	74.3
1-3 days	19	6	25	76.0
4+ "	7	1	8	87.5
Total	110	36	146	75.3
1962 Member in outdoor club: Yes	19	5	24	79.1
No	91	31	122	74.6
Total	110	36	146	75.3
1962 Occupation of leader: White collar	82	23	105	78.1
Blue collar	22	11	33	66.7
Not employed	6	2	8	75.0
Total	110	36	146	75.3

Table 2.—Summary of chi-square analyses for bias in registration data

Variable	Year of data	Number of groups	Degrees of freedom	Chi-square at 0.05 level	Obtained chi-square
Troils (five heaviest used)	1962	118	4	9.49	4.79
Blacks -----	1961	88	1	3.84	2.41
	1962	146	1	3.84	.04
Days of week -----	1962	146	1	3.84	.06
Classes -----	1962	146	4	9.49	10.65*
Made of travel -----	1961	94	1	3.84	9.07**
	1962	146	1	3.84	7.59*
Size of party -----	1961	94	4	9.49	8.22
	1962	146	4	9.49	13.55**
Purpose of trip -----	1962	146	2	5.99	25.46***
Number of years' prior use --	1962	91	3	7.82	8.65*
Number of times' prior use --	1962	146	2	5.99	6.48*
Prior travel "this" year ----	1961	91	1	3.84	4.48*
	1962	146	1	3.84	1.93
Distance of residence -----	1961	94	3	3.84	1.61
	1962	146	1	3.84	.50
Size of residence community --	1961	94	3	7.82	3.02
Reason for choice of area --	1962	146	4	9.49	5.79
Distance went into area ----	1962	146	3	7.82	2.03
Length of stay -----	1961	94	2	5.99	1.10
	1962	146	2	5.99	.73
Membership of leader in outdoor club -----	1962	146	1	3.84	.05
Occupation of leader -----	1962	146	2	5.99	1.81

* Significant at or beyond the 0.05 level.
 ** Significant at or beyond the 0.01 level.
 *** Significant at or beyond the 0.001 level.

Discussion of the Analyses

From the analyses it appears that the registration data may be distorted or incorporate bias on several dimensions. These variables are classes, mode of travel, size of party, purpose of trip, and frequency of prior use of the area. For the other variables, registration data seems appropriate as a basis for generalizations about all trail users of the study areas. Further explanation and qualification of these broad interpretations follow.

Trails and Blocks

Only the five heaviest used trails were included in the analyses; less heavily used trails were excluded because the small cell frequencies violated the assumptions of the chi-square test. The trails analyzed did not include any trails with predominant horseback use.

The variation occurring for the trails analyzed could have occurred by chance more than 5 in 100 times. Consequently, it may be concluded that trails with roughly similar types of use will receive roughly similar registration responses.

When use characteristics for trails are sharply dissimilar, especially on variables known to be associated with response bias, a closer look at trail-associated bias is necessary. For example, the same registration-data expansion factors should never be blindly applied across trails without first determining if the rider-hiker mix is significantly different for some of the trails.

The two blocks compared in the analysis were contiguous but distinctly different geographically. Differences in use characteristics could be expected for each block. Whatever differences occurred did not influence the registration response, which showed only chance variation. This finding makes it credible that

the high quality of response obtained on this area might also be found on other wilderness-type areas.

Block III, the Mountain Lakes Wild Area, could not be included in the analysis because of insufficient data.

Days of Week

The response of groups to registration stations did not vary between weekends (and holidays) and weekdays. Factors directly associated with different days of the week include principally a greater tendency to bunch up at stations on weekends and holidays. Apparently, this factor does not exert an important influence on overall response.

Classes and Mode of Travel

The classes compared here are the classes defined on page 4. Although a significant difference is apparent across classes, this conclusion must be qualified sharply. Another chi-square analysis comparing only the hiking classes showed differences between these classes to be nonsignificant (chi-square: 1.02, 3 d.f., $0.80 > P > 0.70$). But the analysis on the mode of travel variable, a confounded variable in the class analysis, showed that response differences for mode of travel were significant. Consequently, apparent response differences between classes are really attributable only to the differences between groups using different modes of travel.

Hikers respond at registration stations far more adequately than riders, as one might expect. This difference is more dramatic when it is realized that it was anticipated, and deliberate attempts were made to accommodate

stations to the convenience of riders. The failure of these attempts makes it seem clear that social, not physical, factors predominantly underlie the difference. Registration data disproportionately undersample riders and will need accommodation for this bias.

Size of Party

Parties with only one person are not registered as frequently as larger parties. The difference in response was most apparent in the 1962 data; however, the same difference is suggested by the 1961 data.

What factors are associated with this lower response rate for one-person parties? Wording of the sign at the registration station is one factor that may have influenced the difference. Did the sign adequately convey to one-person parties that they were also included in the request for "parties" to register? The 1962 sign was less ambiguous about who should register; however, it was most apparent in the 1962 analysis that one-person parties did not register. A clue is thereby gained that sign wording was not significantly associated with the registration failures.

Size of party is associated with purpose of trip; six of the seven one-person nonregistrant parties in 1962 were fishermen. In response to this clue, all 1962 interviewees were classified by size of party and purpose of trip, and a chi-square analysis was made. Table 3 presents the data.

Table 3.—Purpose of trip for 1962 interview groups of different sizes

Size of party	Primary purpose		Total
	Fishing	Not fishing	
1	7	3	10
2 or more	16	120	136
Total	23	123	146

With a chi-square of 19.62, the obtained differences would have occurred by chance only once or less in 1,000 times. Apparently, one-person parties are much more likely to be pri-

marily classified as fishing than are larger parties. However, as will be seen in the next section, larger groups were less likely to be classified with a specific single purpose such as fishing. Nonetheless, it is apparent that one-person parties tend to be fishermen, and, as discussed later, fishermen do not register as well as others.

Other factors may also be involved in the obviously already complicated interaction. For example, it might be expected that single persons would be less likely to register because they are not exposed to the immediate constraints of socially appropriate action present in the company of others.

What effect does this response bias have on data averages, especially average number of persons per group? As seen in table 4, no effects are apparent. Therefore, a quantitative correction seems unnecessary.

Table 4.—Actual and registered average number of persons per group

Category	1961	1962
Actual average number of persons per group -----	3.915	3.877
Registered average number of persons per group -----	3.440	3.782

Purpose of Trip

Only recreationists were included in the evaluation of registration stations; groups with an administrative or commercial interest were excluded, e.g., Forest Service crews, mineral prospectors, etc. Recreation groups were broadly classified according to the principal type of recreation activity pursued.

For most trail users there is no one specific purpose of their trip. An individual's motives are usually compound—he may wish to see something new or beautiful, exercise his legs, pacify the family, catch fish, collect photographic trophies, have a good social time, etc., and rarely will he be primarily concerned with only one of these motives. The mixture will vary, of course, with different persons. A group, then, would usually be on the trail with many

purposes, and forced-choice classification into narrow categories is meaningless. Consequently, recreation groups were classified as follows:

General type. Includes all composite-type recreation activities, e.g., "going to lake," camping, hiking, sightseeing. But if qualifying evidence was present indicating that the group had a restricted interest in a recreation form, the group was classified under a specific type, e.g., the Trails Club hiking the Skyline Trail.

Specific type, fishing.

Specific type, hunting.

Specific type, other. For example, mountain climbing, rock collecting, botanical study, etc.

Appropriately, most groups fell into the "general type" category. Conversely, few groups fitted the "fishing" category because fishing is usually an individual sport. Although fishermen might have been present in a group, the presence of nonfishermen resulted in a "general type" classification. The nature of other "specific type" categories better accommodated relatively larger groups than the "fishing" category.

"Purpose of trip" was associated with a significant difference in registration response of groups. "Fishing" groups were not registered as often as other groups. In the discussion on size of party, it was noted that the "fishing" groups did, indeed, tend to be one-person groups. And one-person groups also made a poor showing at registration stations. The relationship is not fully understandable from the data but indicates that (1) additional associated variables should be sought and (2) the concept of "purpose of trip" needs further refinement.

Although sufficient quantitative data were not gathered during the hunting season to analyze hunters' responses, observations were made informally. It was overwhelmingly apparent that elk hunters, as a subclass, ignored the stations.³ The response of deer hunters was less obvious and needs further study.

In summary, purpose of trip was associated with response variation at registration stations. Attention should be given this variable in any consideration of bias in registration data, especially in the light of other evidence that social characteristics are differentially associated with different outdoor recreation activities.

Frequency of Use

Prior use of the study area by registrants seems associated with response bias. Supporting evidence comes from the analyses of number of years and times of previous use of the area.

In 1961, interviewees who had already visited the area that year were not registered as often as interviewees making their first 1961 visit. This could indicate a generally poorer response for persons after their first exposure to a station. However, in the 1962 data the relationship was not confirmed. The registration task was somewhat more burdensome in the 1961 study and may be the source of the 1961 difference, or the manipulation of station design in 1961⁴ may have had some influence.

When entire past use was considered, no significant difference occurred between first-time users and users who had visited the area previously. But for repeat users, number of years and times of previous travel were associated with response bias. More users registered who had visited the area only 1 or 2 previous years and from 1 to 10 previous times.

It could be that first-time users would include a substantial number of casual persons who might be inclined to ignore the registration stations. Those who returned for a second trip would, presumably, be more interested in the area and amenable to registering if that seemed to them supportive of the area management. However, the oldtimers, long committed to use of the area, thoroughly familiar with the terrain, confident of their abilities, and with a feeling of vested interest, could be expected to be less responsive to the stations. Although other

³ Hunter vandalism was not an apparent problem.

⁴ See footnote 1.

theories could be entertained, the data seem highly supportive of this one.

The implications of this response bias need consideration when interpretation is made of registration data.

Residence Community

Interviewees were categorized on the basis of distance of their homes from the centers of study areas. Responses of those who lived more than 60 miles from the area visited were compared with those who lived closer to the area. No significant response difference between these groups was apparent. Sizes of the residence communities were then examined. Again no significant response difference was apparent. Groups seem to register about as well whether from the local area or further away, from a rural community or large city.

Reason for Choosing Area

Interviewees in 1962 were asked how they happened to pick this particular area for their trip. Responses were grouped into the following categories: "friends told us about it," "it was close to home," "found it by chance," "was here before and liked it," "other." Groups in each category registered about equally well, that is, differences could have occurred through random sampling errors. Therefore, the question revealed no response bias.

Distance Traveled into the Area, Length of Stay

Is registration response associated with a group's penetration into the area? Groups were categorized on the basis of how far interviewees said they were going or had gone, objective validity of their estimates notwithstanding. No significant differences in registration responses between categories were discovered. Even parties going less than a mile registered as well as, perhaps slightly better than, parties traveling further. How long groups stayed in the area before returning to a road also was not associated with registration response.

Membership in Outdoor Clubs

Are persons who have indicated commitment to the out-of-doors by membership in an outdoor club more likely to register than others? Apparently not; differences in response were not significant.

Occupation

Occupations of interviewees were used as a crude means of determining social status. Occupations were grouped as follows:

White collar—nonmanual types of jobs

Blue collar—manual jobs

Unemployed—retired persons, housewives, unemployed

Occupations so categorized were not significantly associated with response bias.

Conclusions

For some purposes, it is necessary or desirable to use registration data "raw." Examples of such uses would be estimation of length of stay of visitors or sampling for further research studies by using names and addresses of registrants. For these purposes, it is essential to know of bias inherent in the data because of differential response at various places and times or by various classes of users. Knowing what bias is inherent in the raw registration data, we might make suitable adjustments or modify the interpretations of all findings that flow from the raw data.

From the preceding analyses, we conclude that raw registration data is not an unbiased record of all characteristics of all trail users on an area. Some types of persons distort the data on relevant variables by their tendency to avoid registration. Certain variables likely to be distorted have been identified, and possible reasons for distortion on the variables have been offered as a first step in handling the biases.

From the survey data, response biases were discovered to be associated with mode of travel, purpose of trip, size of party, and frequency of previous use. Riders, fishing and elk hunting parties, and single-person parties tended to register less frequently than others; therefore, the registration data underrepresented these user groups. Also underrepresented or underreported by the registration data were persons who had used the area more than 10 times or 3 years.

In some important areas of bias, especially "purpose of trip," the concepts underlying the variable are obscure or poorly conceived. Spe-

cial attention needs to be concentrated on refinement of the underlying concepts if the data are to be useful on the variables.

The variables studied here were derived primarily from the problems of backcountry managers, and a superficial understanding of bias was afforded. But the problems are interrelated with the social backgrounds and other characteristics of the different classes of wilderness users. Research aimed directly at these social characteristics is also needed if they are to be reflected in management practices aimed at accommodating the specific needs of each user class.

An important implication of the study is that different types of persons and groups use the study areas—we found no homogeneous wilderness-user type. Those different types of persons respond to registration stations in different ways, as we might expect that they respond in different ways to other features of the environment, natural or imposed. Managers might better recognize these differing responses, link them to the deeper, underlying social variables and needs, and retranslate this increased knowledge of users and the benefits of use into management action that is responsive to the diverse needs of diverse wilderness-user groups.

Registration stations are highly effective in obtaining the needed basic information useful as "first aid" for management problems and for further research. But the effects of nonresponse must be fully considered, and appropriate modification in interpretations must be made of findings stemming from registration data used raw.

APPENDIX

Registration Forms and Interview Schedules

1961
REGISTRATION BOOK

Please answer all questions. One person only register for each group.

Name of group leader _____ (check one) ☐ We are entering area
Street or Box _____ ☐ We are leaving area
City and State _____ (check one) ☐ We are walking
Date _____ Time _____ ☐ a.m. ☐ We are riding horses
_____ ☐ p.m. ☐ Other _____
The number of persons in this group (what?)
16 years of age and older _____
younger than 16 years _____
The purpose of this trip is
(check one) ☐ recreation
☐ Forest Service work
☐ other work _____
(what?)
We're going or have been in the area
(check one) ☐ less than 1 mile
☐ 1 mile to 15 miles
☐ more than 15 miles

Please answer all questions. One person only register for each group.

Name of group leader _____ (check one) ☐ We are entering area
Street or Box _____ ☐ We are leaving area
City and State _____ (check one) ☐ We are walking
Date _____ Time _____ ☐ a.m. ☐ We are riding horses
_____ ☐ p.m. ☐ Other _____
The number of persons in this group (what?)
16 years of age and older _____
younger than 16 years _____
The purpose of this trip is
(check one) ☐ recreation
☐ Forest Service work
☐ other work _____
(what?)
We're going or have been in the area
(check one) ☐ less than 1 mile
☐ 1 mile to 15 miles
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Please answer all questions. One person only register for each group.

Name of group leader _____ (check one) ☐ We are entering area
Street or Box _____ ☐ We are leaving area
City and State _____ (check one) ☐ We are walking
Date _____ Time _____ ☐ a.m. ☐ We are riding horses
_____ ☐ p.m. ☐ Other _____
The number of persons in this group (what?)
16 years of age and older _____
younger than 16 years _____
The purpose of this trip is
(check one) ☐ recreation
☐ Forest Service work
☐ other work _____
(what?)
We're going or have been in the area
(check one) ☐ less than 1 mile
☐ 1 mile to 15 miles
☐ more than 15 miles

1962 Registration Card

REGISTRATION CARD

ONLY ONE person from each group
please answer ALL questions.

Your Name: _____

Street/Box: _____

City & State: _____

Date: _____ Time: _____ a.m.
p.m.

The number of persons in your group
12 years and older? _____
Younger than 12 years? _____

Did you arrive at the start of this
trail in your own vehicle?

☐ Yes.

☐ No. Name of
vehicle owner: _____

About how long will you be away from
roads on this trip? _____ days (_____ hours)

How will you travel in the area:

☐ Walking

☐ Riding horses (how many?) _____

☐ Other (what?) _____

How many pack animals? _____

The purpose of this trip is:

☐ Recreation (what?) _____

☐ Work (what?) _____

How far into the area are you going?

☐ Less than 1 mile

☐ 1 to 3 miles

☐ 4 to 10 miles

☐ More than 10 miles

Destination in area: _____

BUDGET BUREAU NO 40-6235
APPROVAL EXPIRES 6/30/63

No 7979

Instructions to interviewer:

1. This form is to be filled out by you. Do not give it to the interviewee to fill out by himself. However, if an interviewee wishes to look at the form, it is permissible for him to do so.
2. Read to the interviewee only the capitalized wording.
3. Count for yourself the number of persons and number of pack and saddle stock.
4. Read the detailed instructions for interviewers.

HELLO. I'M (your name) . I'M WITH THE U.S. FOREST SERVICE. WE'RE MAKING A ROUTINE SURVEY OF TRAIL USERS. INFORMATION YOU GIVE ME WILL HELP THE FOREST SERVICE MEET THE NEED FOR TRAILS AND OTHER FACILITIES IN THIS AREA.

(City and State)

HOW DO YOU SPELL YOUR NAME?

WHAT IS YOUR ADDRESS IN (name of city)?

HOW LONG DO YOU EXPECT TO STAY IN THIS AREA BEFORE ARRIVING BACK AT A ROAD?

- ☐ less than 1 day ☐ 8 days to 2 weeks
☐ overnight to 3 days ☐ over 2 weeks
☐ 4 to 7 days

HAVE YOU TRAVELED TRAILS IN THIS AREA BEFORE? ☐ no
(if "yes", ask) THIS YEAR? ☐ no ☐ yes
☐ yes

THANK YOU VERY MUCH FOR YOUR HELP. HAVE A GOOD TRIP!

Total number of persons in group?

(check one) ☐ walking

☐ riding horses

Total number of pack and saddle stock?

☐ other

(specify)

Interview date _____ Time _____ p.m.

12 a.m.

 p.m.

Trail No. _____

Interviewer's initials _____

1962

Budget Bur.No. 40-6134A
Approval expires 6/30/63

FIELD INTERVIEW QUESTIONNAIRE
(Revised Form)

Wilderness-use Study

Form A (Entering)

INTERVIEWER: Only you are to fill this out! Read detailed instructions before beginning. Questions 1-11 refer to interviewee only.

HELLO. I'M MAKING A SURVEY OF TRAIL USERS. WHICH PERSON IS THE GROUP LEADER? (Go to designated person)

I'M (interviewer's name). I'M WITH THE U.S. FOREST SERVICE. I'M GATHERING INFORMATION THAT WILL HELP THE FOREST SERVICE MEET YOUR CHANGING NEEDS FOR TRAILS AND OTHER FACILITIES IN THE AREA.

1. (A) HAVE YOU EVER TRAVELLED TRAILS IN THIS AREA BEFORE?

☐ Yes

(if yes, ask):

☐ No (if no, skip to question 3)

(B) EARLIER THIS YEAR?

☐ Yes

(if yes, ask):

☐ No (if no, skip to question 2)

(C) WHICH TRAILS WERE YOU ON THIS YEAR? _____

2. ABOUT HOW OFTEN HAVE YOU USED TRAILS IN THIS AREA PREVIOUS TO THIS YEAR?
(Probe for both years and times)

Years:

☐ 1 year

☐ 2 years

☐ 3-5 years

☐ 6-10 years

☐ More than 10 years

Times:

☐ 1 time

☐ 2 times

☐ 3-5 times

☐ 6-10 times

☐ More than 10 times

3. HOW DID YOU HAPPEN TO PICK THIS PARTICULAR AREA FOR YOUR TRIP RATHER THAN SOME OTHER?

☐ Friends told us about it

☐ Close to home

☐ Found it by chance

☐ Been here before and liked it

☐ Other: _____

4. (A) ARE YOU A MEMBER OF AN OUTDOOR CLUB?

☐ Yes

(if yes, ask):

☐ No (if no, skip to question 5)

(B) WHICH ONE? _____

(C) IS THIS TRIP SPONSORED BY YOUR CLUB?

☐ Yes

☐ No

5. HOW LONG DO YOU PLAN TO STAY IN THE AREA BEFORE GETTING BACK TO THE ROAD?

☐ Less than 1 day

☐ Overnight to 3 days

☐ 4-7 days

☐ 8 days to 2 weeks

☐ Over 2 weeks

FIELD INTERVIEW QUESTIONNAIRE--Form A--page 2.

6. HOW MANY MILES DO YOU PLAN TO GO INTO THE AREA THIS TIME?
☐ Less than 1 mile ☐ 4-10 miles
☐ 1 mile to 3 miles ☐ More than 10 miles
7. WHERE IN THE AREA DO YOU PLAN TO GO? _____
8. WHERE IS YOUR HOME? (city & state) _____
9. WHAT IS YOUR ADDRESS IN (name of city)? _____
10. HOW DO YOU SPELL YOUR NAME? _____
11. WHAT IS YOUR OCCUPATION? _____
12. (A) BY WHAT MEANS OF TRAVEL DID YOU ARRIVE AT THE BEGINNING OF THIS TRAIL?
☐ Motor vehicle ☐ Other(what?): _____
(if motor vehicle, ask): (skip to question 13)
- (B) DID YOUR PARTY ARRIVE IN MORE THAN ONE VEHICLE?
☐ Yes ☐ No
(if yes, ask): (if no, ask):
- (C) (1) WHAT ARE THE NAMES OF THE OWNERS?
☐ Registrant owns one
☐ Other owners(names): _____

- (2) DOES THE VEHICLE BELONG TO YOU?
☐ No ☐ Yes
(skip to 12)
- (3) WHAT IS THE OWNER'S NAME? _____
13. WHAT IS THE MAJOR PURPOSE OF THIS TRIP?
☐ Recreation(what?): _____ ☐ Work(what?): _____
14. DO YOU HAVE ANY FURTHER COMMENTS ABOUT THIS AREA? (Write key words to remarks at time of interview. Detail remarks after interview).

THANK YOU FOR YOUR HELP. HAVE A GOOD TRIP.

15. ☐ Total number of persons in group 19. Age and sex distribution of group:
16. ☐ Total number of pack stock
17. ☐ Total number of riding stock
18. Recreation equipment visible: _____

- _____ females older than 12
_____ females younger than 12
_____ males older than 12
_____ males younger than 12

Interview date: _____ Interview time: _____ a.m. p.m. Trail Number: _____
Trail Name: _____ Interviewer's initials: _____

Interviewer: Make additional comments on back!

1962

FIELD INTERVIEW QUESTIONNAIRE
(Revised Form)

Wilderness-use Study

Form B (Leaving)

INTERVIEWER: Only you are to fill this out! Read detailed instructions before beginning. Questions 1-11 refer to interviewee only.

HELLO. I'M MAKING A SURVEY OF TRAIL USERS. WHICH PERSON IS THE GROUP LEADER? (Go to designated person)

I'M (interviewer's name) . I'M WITH THE U.S. FOREST SERVICE. I'M GATHERING INFORMATION THAT WILL HELP THE FOREST SERVICE MEET YOUR CHANGING NEEDS FOR TRAILS AND OTHER FACILITIES IN THE AREA.

1. (A) HAVE YOU EVER TRAVELLED TRAILS IN THIS AREA BEFORE THIS TRIP?

☐ Yes

(if yes, ask):

☐ No (if no, skip to question 3)

(B) EARLIER THIS YEAR?

☐ Yes

(if yes, ask):

☐ No (if no, skip to question 2)

(C) WHICH TRAILS WERE YOU ON THIS YEAR BEFORE THIS TRIP? _____

2. ABOUT HOW OFTEN HAVE YOU USED THE TRAILS IN THIS AREA PREVIOUS TO THIS YEAR? (Probe for both years and times)

Years:

☐ 1 year

☐ 2 years

☐ 3-5 years

☐ 6-10 years

☐ More than 10 years

Times:

☐ 1 time

☐ 2 times

☐ 3-5 times

☐ 6-10 times

☐ More than 10 times

3. HOW DID YOU HAPPEN TO PICK THIS PARTICULAR AREA FOR YOUR TRIP RATHER THAN SOME OTHER?

☐ Friends told us about it

☐ Close to home

☐ Found it by chance

☐ Been here before and liked it

☐ Other: _____

4. (A) ARE YOU A MEMBER OF AN OUTDOOR CLUB?

☐ Yes

(if yes, ask):

☐ No (if no, skip to question 5)

(B) WHICH ONE? _____

(C) IS THIS TRIP SPONSORED BY YOUR CLUB?

☐ Yes

☐ No

5. HOW LONG HAVE YOU BEEN IN THE AREA AWAY FROM ROADS?

☐ Less than 1 day

☐ Overnight to 3 days

☐ 4-7 days

☐ 8 days to 2 weeks

☐ Over 2 weeks

FIELD INTERVIEW QUESTIONNAIRE--Form B--page 2

6. (A) WHERE DID YOU ENTER THIS AREA?(probe) _____
- (B) ARE ALL MEMBERS OF YOUR STARTING PARTY HERE WITH YOU NOW?
☐ Yes ☐ No.(probe) No. entering: _____
7. WHERE IN THE AREA DID YOU GO? _____
8. WHERE IS YOUR HOME? (city & state) _____
9. WHAT IS YOUR ADDRESS IN (name of city)? _____
10. HOW DO YOU SPELL YOUR NAME? _____
11. WHAT IS YOUR OCCUPATION? _____
12. (A) BY WHAT MEANS OF TRAVEL DID YOU ARRIVE AT THE POINT WHERE YOU ENTERED THIS AREA?
☐ Motor vehicle (if motor vehicle, ask): ☐ Other(what?): _____
(Skip to question 13)
- (B) DID YOUR PARTY ARRIVE IN MORE THAN ONE VEHICLE?
☐ Yes (if yes, ask): ☐ No (if no, ask): _____
- (C) (1) WHAT ARE THE NAMES OF THE OWNERS?
☐ Registrant owns one
☐ Other owners(names): _____
- (2) DOES THE VEHICLE BELONG TO YOU?
☐ No ☐ Yes (skip to 12)
- (3) WHAT IS THE OWNER'S NAME? _____
13. WHAT WAS THE MAJOR PURPOSE OF THIS TRIP?
☐ Recreation(what?): _____ ☐ Work(what?): _____
14. DO YOU HAVE ANY FURTHER COMMENTS ABOUT THIS AREA? (Write key words to remarks at time of interview. Detail remarks after interview).

THANK YOU FOR YOUR HELP. HAVE A GOOD TRIP HOME.

15. ☐ Total number of persons in group 19. Age and sex distribution of group:
16. ☐ Total number of pack stock _____ females older than 12
17. ☐ Total number of riding stock. _____ females younger than 12
_____ males older than 12
18. Recreation equipment visible: _____ males younger than 12

Interview date: _____ Interview time: _____ a.m.
p.m. Trail Number: _____
Trail Name: _____ Interviewer's initials: _____

Interviewer: Make additional comments on back!

Wenger, Wiley D., Jr., and Gregersen, H. M.

1964. The effect of nonresponse on representativeness of wilderness-trail register information. U. S. Forest Serv. Res. Paper PNW-17, 20 pp., illus.

Knowing how nonresponse affects the representativeness of wilderness-trail register data, we can increase its usefulness for management and further research. Interview survey data showed that horse users, fishermen, elk hunters, single-person parties, and frequent or long-time users tended to be underrepresented by registration data from the two Oregon areas studied. Research aimed directly at the social characteristics associated with differing responses could aid managers in meeting specific needs of specific user classes.

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